

MoCo Sequestration WorkGroup

Urban/ Suburban, Food Waste and Land-Use Solutions

About

This document has been created and developed by Susan Eisendrath, Ellen Gordon, Sylvia Tognetti and Dorcas Robinson. It is based on the discussions and minutes from the Sequestration workgroup's meeting of the 9th of January 2020, focused on Urban/Suburban, Food Waste and Land Use Solutions for sequestration, and facilitated by Evan Notman.

Urban/Suburban, Food Waste and Land-Use

Overview

Every form of land that is not built upon is vital to a climate-resilient future. Healthy soils - in forests, wetlands, backyards, farms - are vital to the natural carbon cycling system, and our ability to withstand flooding and droughts, to grow adequate nutritious food, to support diversity of organisms, plants and animals. Yet our local soils are an underutilized sequestration resource and they are under threat.

The opportunity - the imperative - is to transform our approach to soils; to turn every form of land management into a soil carbon cycling opportunity. In order to advance this transformative approach, we need to be exploring and rapidly applying bold new strategies that include adopting healthy soil management policies ([need footnote to models](#)) and creative financing mechanisms such as healthy soil pricing and carbon farming incentives. We need to identify and address and move away from the current land management systems and practices that are not healthy soil practices such as: treating organic matter (leaves, food scraps etc) as waste and not as the soil building blocks, the valuable materials they should be; using chemical fertilizers and pesticides on residential yards, our parklands, school grounds and in conjunction with agricultural management methods. Family and community yards and spaces are an important opportunity for applying climate friendly landscaping, land management and action. Lawns [cover roughly 2% of land area](#) in the US (3X the area covered by irrigated corn), and are a major source of GHG emissions: through the large-scale use of gas powered lawn-mowers and leaf-blowers, of freshwater watering, and of chemical fertilizers. Yet lawns are a notable land sector that need to become a significant net sequestration opportunity, as highlighted by a growing '[backyard carbon farming](#)' movement.

The U.N. Food and Agriculture Organization has estimated that if current trends continue, the world has less than [60 years' worth](#) left of topsoil. Yet there is exciting research that demonstrates that this can be turned around through land management practices that integrate the use of [organic waste \(compost\)](#) with the ambitious scale-up of many existing conservation agriculture and reforestation practices.

"Huge Potential: Changes in agricultural land management, combined with conservation and restoration of forests, wetlands and grasslands, can provide over one-third of the cost-effective climate mitigation needed to stabilize global warming below 2°C degrees.¹⁸ Emerging evidence on compost, silvopasture,¹⁹cover crops, storing soil carbon at depth,²⁰ and perennial crops indicate even greater mitigation potential in the quest to keep global warming below 1.5°C. •Levers for Change: This guide identifies seven levers for change and five game-changing strategic initiatives for investment. Healthy soil solutions available today have the potential to make a scalable impact on climate change, food

security, water quality and conservation, biodiversity, resilience, and deforestation.” [Health Soils to Cool the Planet - A Philanthropic Action Guide \(2019\)](#)

Montgomery County generates approximately 160,000 tons of compostable waste per year from all sources, according to the [County Strategic Plan to Advance Composting, Compost Use, and Food Scraps Diversion](#) (2018). Montgomery County only has 3 pilot county based composting programs and has plans to launch a composting program for the commercial sector, for which the county has secured 4,000 tons of organic material capacity for processing at the Prince George’s Composting Facility. While this is a good start to the programs that we need to both generate compost and use it for sequestration, clearly, we need more composting capacity for the food waste and scraps generated in the county and we need more compost for sequestering carbon in our soils.

“From a climate perspective, compost is a triple win. It increases sequestration (the drawdown of atmospheric carbon into the soil), mitigates emissions from other sources (landfilling, burning or allowing organic materials to rot in ponds or pits, which releases the powerful, short-lived greenhouse gases methane, nitrous oxide and black carbon) and enhances the land’s resilience to extreme weather (flooding and drought).” [Marin Carbon Project](#)

Food waste recycling is one of the most readily available strategies for achieving multiple benefits including the following: 1) increasing the county recycling rate to achieve a diversion goal beyond 70%; and by using compost 2) contributing to the achievement of the counties greenhouse gas emission reduction goals through sequestration; 3) improving county soil health; 4) reducing stormwater runoff through application of compost to absorb moisture; 5) and many more co-benefits that composting and compost use provide such as improved plant health and crop yields. (see more at: <https://mocofoodcouncil.org/resources/>)

[Place the work in the larger context of healthy communities, sustainable development, food and fiber supply chains, water filtration and conservation, and the need for food security and stormwater management-all these are cross over issues, have co-benefit elements, and relate to mitigation and adaptation strategies..](#)

Practices for sequestering carbon through urban/suburban land-use

There are a variety of urban and suburban land-use practices that can result in sequestering carbon. These can involve public, private and commercial land.

These practices include:

- Planting native trees in yards and on curbsides
- Planting native woody shrubs in yards
- Creating food and fruit production yards and micro-forests
- Reducing the amount of lawn maintained – replacing with food production and native plants that attract pollinators/bees and urban wildlife such as birds,
- Creating stormwater management gardens, bioswales and other Rainscape practices for areas that flood
- Never leaving soil uncovered – using mulches and planting native ground cover such as clover and cover crops
- Collecting and using all leaves – and using these as mulch and/or for composting, mixed with food scraps.
- Composting food scraps and food waste, especially on residential properties reduces carbon used for hauling organic materials
- Using compost on all soils to improve the soil food web and sequester carbon
- Using no till and low soil disturbance gardening and landscaping methods

The backyard carbon farming concept - turning residential backyards and other urban and suburban spaces into net carbon sinks, involves practices that are also critical for healthy water, attracting pollinators and promoting biodiversity, and they can increase residential backyard food and fruit production, and this practice integrates composting into the cycle, thus reducing the amount of organic materials that are “wasted” put into the waste disposal management systems, and this is a huge opportunity to “recycle” food waste and scraps, since our county, currently burns residential organic materials.

The potential contribution of urban/ suburban land-use to sequestering carbon in MoCo

The potential contribution of using compost to sequestering carbon in MoCo

Compost [has been shown](#) over the last several years—not just in this study—to be more effective in helping soil sequester carbon than it has been recognized for to-date.

Researchers found that systems using cover crops alone not only failed to store more carbon, they actually lost significant amounts of carbon in the soil below about a foot deep. The system that used both cover crops and compost, however, had significantly increased soil carbon content over the length of the study—about .7 percent annually. That may sound like a small number, but it’s enormous in the context of soil, where change is slow and gradual. The [“4 per 1,000”](#) initiative has called for a 0.4 percent increase in soil carbon annually around the globe as a way to combat climate change¹.

According to the [HDR Baseline and Current State Assessment Montgomery County Master Plan: Technical Memorandum #1](#) (2018), the County has a goal of diverting 70% of all municipal solid waste from disposal in landfills or incinerators by 2020. Currently the County gets 5% credit for waste reduction efforts, which, combined with the 56% recycling rate gives an overall diversion rate of 61% for 2017, corresponding to 616,732 tons of recyclables diverted for the year. Assuming a participation rate of even just 50 to 70% in a composting program, approximately 75,000 to 110,000 tons are likely to be “capturable” via voluntary food waste collection programs. If 110,000 tons of food waste were composted annually, this would increase the recycling rate to 66% and the diversion rate to 71%, assuming the overall generation rate remained constant. Published estimates of soil carbon sequestration's mitigation potential vary from 1.5 to 15.6 billion tons of CO₂eq.Y-1². <https://mocofoodcouncil.org/resources/>

How does using compost to sequester carbon work?

“Plants take in carbon dioxide, extracting it from the air by photosynthesis to make roots, stems, and leaves. Through processes involving plants and microorganisms, the carbon is then transferred to the soil. Living organisms and fresh organic matter provide short term carbon storage, and a small percentage becomes persistent carbon that can reside in the soil for decades, centuries or even millennia, providing long term carbon storage. The amount of soil organic carbon stored in a given soil is dependent on the equilibrium between the amount of carbon entering the soil and the amount of carbon leaving the soil from respiration. Soil respiration is a measure of carbon dioxide (CO₂) released from the soil from decomposition of soil organic matter (SOM) by soil microbes and respiration from plant roots and soil fauna. As long as we are sequestering more than we are respiring, we are storing carbon to help cool the planet. Historically, we have lost an estimated 133 gigatons of carbon from our lands and many of these degraded areas are prime targets for restoration and changed practices.³”

¹ <https://civileats.com/2019/09/17/is-compost-the-secret-to-making-ag-climate-friendly/>

² <https://www.breakthroughstrategiesandsolutions.com/soilguide>

³ <https://www.breakthroughstrategiesandsolutions.com/soilguide>

Compost is made

The institutional limitations and opportunities for realizing this potential contribution

However, the realization of this potential is contingent on getting to the 'right' mix of policies, technical support, incentives and public education that support the recommended actions. Some important limitations and opportunities include:

This section needs developing

- **The current County model for composting:** This is based on making composted organic material into a product that is sold for a profit. If we do not get the material back on MoCo soils, we do not get the direct carbon sequestration benefits.
- Y
- Z

Potential scenarios for increasing MoCo's level of sequestration through urban/suburban land-use

The recommendations of the sequestration workgroup outlined below emphasize phases of action.....

Further research and investigation is needed into x, y and z. See [Questions for Further Research](#) below.

Synergizing and prioritizing across agricultural soils, forests, wetlands and other landscapes

A vision, goal, and objectives for sequestering carbon through urban/ suburban land-use

Vision

Goal and Objectives

This is a Climate Emergency. Ambitious efforts to sequester carbon are not a 'nice to have' but a critical component in efforts to restore a safe, livable climate. The nature-based sequestration systems that are available in MoCo have technical limits in terms of just how much carbon can be sequestered over time in each system, and how long/ deeply it can be sequestered.

It is important to evaluate the potential and limits over time, in terms of metric tons of CO₂e. But it is also important to build a sequestration action plan around a deeper understanding of carbon cycles (fundamental cycle of life), and of the range of additional benefits that a well-managed carbon cycling system provides. An expansive focus on sequestration is fairly new in climate action planning; as yet, approaches and methods for measuring and evaluating these actions to inform and inspire policy-makers, investors, taxpayers, key actors in the system etc, are nascent. However, it is possible to construct an understanding of the multiple values that investments in nature-based sequestration systems can bring, through the identification of co-benefits.

The MoCo sequestration plan should be developed with a goal and a set of linked objectives, as follows:

- Goal for sequestration (such as target % by 2027/ 2035/ 2040)
- Objective for co-benefit 1 - Other emissions reductions (e.g. net avoided emissions due to organic waste management at X% to provide on-farm compost)
- Objective for co-benefit 2 - Adaptation/ ecological resilience gains (e.g. reduced flooding/ improved water management due to improved soils)
- Objective for co-benefit 3 - Social equity/ resilience gains (e.g. increased local and nutritious food)
- Objective for co-benefit 4 - Well-being and prosperity gains (e.g. market system and good jobs created around organic waste management)

A potential goal for the urban/ suburban land-use focus could be something like.....

The objectives for co-benefits then add additional rationale for investments that achieve this.

Decision-making considerations for MoCo

Criteria for decision-making

There will be important co-benefits of certain actions (some are reflected in the vision and objectives), which should be explicitly recognized and estimated. This will help decision-makers to make the case for those actions where the sequestration value alone is not considered sufficient. There are also potential trade-offs between different actions, as discussed below.

Therefore, the sequestration workgroup proposes that a set of decision-making criteria are developed to ensure that co-benefits and trade-offs are well considered when policies and programs are being developed. These criteria should reflect the principles and values discussed below, and could be applied through a form of check-list that is required for all future policy and legislative decisions.

Trade-offs - and cross-cutting opportunities

It is not possible in advance to list out all the potential trade-offs that could occur as policies and legislation are further developed to support the Climate Action Plan, and other MoCo priorities. However, it is important to make the existence of trade-offs explicit, and to establish ways in which these could be managed e.g. by applying a set of principles like those below.

Are there any considerations/ examples specific to Urban/ Suburban land-use to include here?

Co-benefits

Conversely, some potential trade-offs, such as having to make choices about whether to spend money on x or y, could, if appreciated from the perspective of being part of a system (see next section), represent important cross-cutting opportunities and co-benefits. One example would be the imperative to move to zero waste, which includes a commitment to scaling composting of organic waste, and the imperative to generate organic fertilizer at a scale and quality that farmers can use to support sequestration through soils.

There are important co-benefits to be found along all aspects of nature-based sequestration solutions. For example, more trees are needed in agricultural landscapes, and the integration of fruit and nut trees can create benefits such as food and income diversity.

Are there any considerations/ examples specific to Urban/ Suburban land-use to include here?

While the practice of applying compost to soil for carbon sequestration is a relatively new and emerging area for climate solutions, there are many co-benefits related to using compost. Compost is a beneficial soil amendment because it: increases water retention and helps conserve water, prevents soil erosion, increases soil life and the soil food web, puts nutrients back into the soil, makes soil slowly release nutrients to plants and balances pH levels, provides diverse microbial and bacterial and fungal communities that protect plants from diseases and pests, improve crop yields, save money by reducing the need for synthetic fertilizers, improves soil composition and properties⁴.

Composting can also be an economic development tool. “On a per-ton basis, in Maryland, composting (including mulching and natural wood waste recyclers) employs two times more workers than landfilling,

⁴ <https://ilsr.org/benefits-composting-compost/>

and four times more workers than incineration. On a per-capital-investment basis, for every \$10 million invested, composting facilities in Maryland support twice as many jobs as landfills and 17 more jobs than incinerators.⁵

Programs such as Community Composting can be used to promote community and neighborhood cooperation. As a practice that more and more cities and counties are providing to residents and businesses, composting is a service that can contribute to attracting businesses and new residents.

All these co-benefits of composting and compost use need to be documented and calculated, such as enhancing economic development, improving public health, improving soil health and the soil food web, enhancing equity and affordability, increasing community and neighborhood cooperation, and other aspects of improving quality of life. Assessments might include questions such as:

- “How does the county composting program make the county more attractive place for businesses?”
- “How does the county composting program improve the capacity of the county to manage stormwater runoff?”
- “How is the use of compost improving reforestation and forest preservation?”

Evaluation of co-benefits should be included in lifecycle analysis and cost benefit analysis and should highlight the short, medium, and long term benefits that the county could achieve through the Climate Plan goals related to composting and sequestration.

Principles and Values

- **Foster systems thinking and adaptive management:** Actively identify and evaluate the social, ecological and economic co-benefits and potential trade-offs of policy and legislative decisions, and how these will impact the County’s emissions, sequestration and adaptation targets. Design programs and partnership to ensure a high level of interaction and learning among key actors stimulating adaptive management capacities through incentivizing innovation, rapid feedback loops, taking small bets etc.
- **Apply systems analysis to design plans and programs:** Identify the “levers” or the approaches to changing underlying drivers of change in the system, such as legislation and regulations, tax mandates and incentives, programmatic services, market forces, voluntary actions, etc. The levers of change need to target the drivers, e.g. what motivates people to take action, what factors cause emissions increases, in order to dramatically change the system’s performance. Climate Plan strategies need to selected based upon criteria designed to take into consideration such factors such as cost efficiency, emissions reduction potential, degree of county control, speed at which impact can be achieved, and other relevant factors that relate to deep and sustained systems change.
- **Promote social equity, climate and restorative justice:** Prioritise benefits and opportunities for disadvantaged groups, address systemic and historical discriminations, and protect the right of future generations to a safe and secure climate.
- **Protect and enhance biodiversity and ecological resilience:** Value each nature-based sequestration system for its wider role in enabling critical ecosystems to recover, and to maintain the redundancy and diversity that supports ecosystem resilience over time.

⁵ [Pay Dirt: Composting in Maryland to Reduce Waste, Create Jobs & Protect the Bay](#), (2013) Institute for Local Self Reliance

- **Do not count sequestration as a way of off-setting lack of progress on emissions reductions:** Efforts to sequester carbon should not be used to off-set limited progress on the County's emissions reduction targets. They should be valued as an independent contribution to negative emissions and enhanced biodiversity, ecological and social resilience.
- **Base decisions on resilience/ adaptation principles:** Resilience/ adaptation practice has shown the importance of certain [principles](#) that need to be considered in policy-making and business contexts for enhanced resilience. These include the principles of promoting flexibility and learning, maintaining diversity and redundancy, and expanding participation

Are there any considerations/ examples specific to Urban/ Suburban land-use to include here?

Recommendations for sequestration through urban/ suburban land-use

Quick wins, small bets and no regrets actions for 2020

These are actions that can and should be taken now by MoCo, even while the Climate Action Plan is being finalized. They are actions that fit with on-going policies and programs and/or can be justified in light of the County's Climate Emergency Mobilization Resolution and will likely generate a range of co-benefits.

Overarching Recommendation	Specific Recommendations	Comments
<p>Expand County backyard composting program by allowing food scraps to be composted, providing rodent proof compost containers, and providing compost training based upon best practices and providing demonstration composting education hub sites. Include training on how to use compost and benefits such as building healthy soil and carbon sequestration.</p>	<ol style="list-style-type: none"> 1. Amend County codes that restrict composting of food scraps on residential property. 2. Bulk purchase or provide rebates for residents to obtain approved compost containers for food scraps. 3. Adapt existing training program (from DC backyard composting program) and train-trainers (such as Master Gardeners and other volunteers) to provide trainings on best practices for composting of food scraps and compost use. 4. Establish Composting Education Hubs throughout the County and include demonstration sites for residents to learn how to compost and how to use compost. 	<ol style="list-style-type: none"> 1. Review model codes and amend county code to allow food scrap composting. Use resources such as the Institute for Local Self Reliance: Yes in My Backyard: A Home Composting Guide for Local Government https://ilsr.org/composting-bmp-guide/ 2. & 3. Use the above resource and model the program after the DC Government backyard composting program. Example of compost containers such as the one offered by Backyard Composting can be purchased bulk order for a reduced price and sold to residents. 4. Establish Koiner Farm as a model for Composting Education Hubs-for training and distribution of composting containers. The Montgomery County Food Council Environmental Impact Working Group and Master Gardeners are already assisting Koiner Farm with this effort.
<p>Establish County Community Composting Hubs that utilize rodent proof containers, best practices throughout the county.</p>	<ol style="list-style-type: none"> 1. Adapt the existing DC Community Composting Program to provide neighborhood based community composting. 2. Provide Master Composter training programs and education about how to compost, compost use, and benefits of compost for healthy soil and carbon sequestration. 	<ol style="list-style-type: none"> 1. Use the Community Composting Done Right: A Guide to Best Management Practices https://ilsr.org/composting-bmp-guide/ to design and implement the community composting program and review and adapt the DC program. 2. Partner with Master Gardeners and establish Master Composters as trainers.
<p>Expand On-Farm Composting</p>	<ol style="list-style-type: none"> 1. Provide composting training 	<p>1.& 2. Work with the MC Office</p>

<p>and Compost Use</p>	<p>for farmers. 2. Assess and provide technical assistance to support farmers, such as equipment for composting 3. Increase compost use on farms 4. Review County and State legislation related to on-farm composting and identify amendment improvements to facilitate composting 5. Review and adopt best practices for carbon farming programs-consider incentives</p>	<p>of Agriculture and other resources such as the Food Council and the Institute for Local Self Reliance to provide trainings (this is currently being explored) 3. Work with the Office of Agriculture to identify areas for expanding and promoting compost use and track usage 4. & 5. Work with the Office of Ag. and farmers to identify and recommend any necessary amendments to increase on-farm composting and to design carbon farming programs</p>
<p>Institute on-site composting programs throughout the county</p>	<p>1. Assess the potential for key institutions to establish on-site composting operations 2. Provide support for institutions to identify financial assistance to establish on-site composting operations.</p>	<p>1. Identify and utilize model on-site composting programs for institutions, such as Montgomery College. Provide training programs that include best practice management and technical assistance,</p>
<p>Institute composting program for commercial businesses</p>	<p>1. Provide toolkits and training for commercial businesses to establish composting programs based on best practices 2. Provide resources for collecting and transporting food scraps to composting facilities, ideally within the county</p>	<p>1.&2. Use County Composting Strategic Plan and Zero Waste Task Force Report resources to identify models for establishing commercial composting programs</p>
<p>Institute composting program for multi-family residents</p>	<p>1. Provide toolkits and training for commercial businesses to establish composting programs based on best practices 2. Provide resources for collecting and transporting food scraps to composting facilities, ideally within the county</p>	<p>1.&2. Use County Composting Strategic Plan and Zero Waste Task Force Report resources to identify models for establishing commercial composting programs</p>
<p>Institute composting program for single-family residents</p>	<p>1. Establish food scrap collection program based upon best practices 2. Provide educational materials and enact an outreach campaign to raise awareness and educate residents about the benefits of composting and compost use</p>	<p>1.&2. Use County Composting Strategic Plan and Zero Waste Task Force Report resources to identify models for establishing commercial composting programs</p>

	3. Provide resources for transporting food scraps to composting facilities ideally within the county	
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Expand composting, compost use and education in schools	<ol style="list-style-type: none"> 1. Provide toolkits for schools at all levels to establish composting both on-site and off-site 2. Provide toolkits for schools to use compost on the school grounds and for school gardens 3. Provide toolkits for schools to integrate curriculum modules on composting and compost use 4. Integrate composting and compost use into the SERT program 5. Address and provide facility staff with support to institute food scrap composting 	1.& 2.& 3. & 4. The Institute for Local Self Reliance is creating a best practice guide for schools to use. Work with MCPS as a key stakeholder and county programs, such as Rainscapes and Master Gardeners should be involved in executing this goal along with PTA's and Green Teams. Other organizations involved in this effort are: Mont. Cnty. Food Council and Bethesda Green. Use strategies such as food waste audits to raise awareness of wasted food.
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Institute food scrap composting program at all farmers markets	1. Provide food scrap composting program collections and pick up and composting of food scraps at all farmers markets	1. Model the program after best practices established in DC
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Expand composting capacity within the county	<ol style="list-style-type: none"> 1. Divert residential food scraps into backyard composting and community composting systems 2. Identify and establish mid scale food scrap composting operations throughout the county/on county owned properties (to reduce transportation carbon emissions) 3. Establish on-site composting programs for institutions, schools, businesses 4. Stop incinerating food scraps and waste and divert food scraps and food waste from the county incinerator and compost the food scraps and food waste preferably in the county 5. Convert the Dickerson Yard Waste Composting facility to an operation that also composts 	<ol style="list-style-type: none"> 1. Expand the backyard composting program (see corresponding recommendations) 2. & 3. & 4. 5. Utilize all food scraps and waste for recycling this valuable resource and create compost. Model on-site composting programs after best practices. Model the conversion of the facility after Prince George's Composting Facility and other best practices and methods. Facility and equipment upgrades and increased staffing will be necessary and assessment on return on investments should include analysis of co-benefits related to compost use. Work with communities surrounding the
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	<p>food waste and scraps</p> <p>6. Assess and implement necessary modifications to the Transfer Station Annex Building to accommodate receipt and transfer of food scraps for composting</p> <p>7. Identify, establish and map carbon sources such as wood chips from landscaping services and “brown” organic materials and promote the use of them for composting food scraps and waste</p>	<p>Dickerson Yard Waste Composting Facility to address and mitigate the impact of using the facility for food scrap composting. Utilize assessments such as the Food Council Environmental Impact Working Group March 3, 2019 summary of potential options https://mocofoodcouncil.org/resources/</p> <p>Model mid scale operations after local and national best practices and facilities such as Veterans Compost and provide support for composting businesses such as Compost Crew</p>
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<p>Expand use of compost in the county and support and prioritize the use of “MoCo-locally made compost”</p>	<ol style="list-style-type: none"> 1. Create and implement a broad based education and outreach program on the benefits of composting and compost use 2. Identify key areas for expanding the use of compost, such as mulching for landscaping and gardens 3. Institute a program to promote compost use for food production on private properties/lawns 4. Conduct a compost marketing study to identify the potential markets and sources of high quality compost 	<ol style="list-style-type: none"> 1. Identify and modify existing educational materials used by model programs 2. Utilize existing county programs such as Rainscapes, tree planting programs and expand compost use through businesses and landscaping services and gardening programs 3. Identify and utilize best practices and model programs to establish local food production using compost similar to “Victory Gardens” 4. Work with the Chamber of Commerce, MC Office of Economic Development, MC Green Business Certification Program, and The US Composting Council https://www.compostingcouncil.org/ to conduct the marketing study
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<p>Institute incentive and disincentive programs that promote composting and compost use</p>	<ol style="list-style-type: none"> 1. Institute a non-regressive “Save as You Throw” (Pay as You Throw) program (This strategy charges residents based on the amount of trash produced rather than via property taxes or fixed fees. 	<ol style="list-style-type: none"> 1. Examples of models for Save as You Throw programs are Austin, San Francisco, Minneapolis. Review studies such as Skumatz Economic Research Associates on separate unit pricing programs
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	<p>Make sure the fee structure is not regressive, so as not to impact low-income residents disproportionately. Note: this was also a recommendation in the County Executive Transition Team Report https://www.montgomerycountymd.gov/OPI/Resources/Files/2019/MarcElrich_Transition_Team_Report.pdf</p> <p>2. Establish differential tip fees to motivate generators to source-separate food scraps and other organics, and encourage collectors to provide recycling collection of such materials.</p>	<p>and apply effective strategies that address equity issues.</p>
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<p>Establish the carbon emissions sequestration values related to the recommendations provided in the Zero Waste Task Force Report</p>	<ol style="list-style-type: none"> 1. Estimate the comparison of carbon emissions reductions in relation to the high priority zero waste management strategies such as composting compared to incineration. 2. Utilize carbon emissions sequestration estimates of potential strategies and methods to establish program priorities 3. Identify co-benefits of resource management methods, such as composting and compost use compared to incineration and landfill disposal of food scraps and waste 	
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<p>Expand the collection and redistribution of food that can be consumed</p>	<ol style="list-style-type: none"> 1. Identify and map all available food recovery opportunities and coordinate with food rescue stakeholders to facilitate the collection and food redistribution to food insecure populations 2. Establish barriers and solutions to food donations-such as providing education for food donors related to proper separation and storage. Other issues such as standardizing food labels need to be explored at the State level. 3. Educate and facilitate the use 	<p>1.& 2.& 3. Key stakeholders include: Manna Food and Community Food Rescue, County HHS, Mont. Cnty Food Council. Additional sources include: businesses, schools/MCPS, Office of Ag., farmers</p>
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	of the tax incentive to increase the amount of food farmers donate to food rescue organizations	
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Update the county website to include more information and resources on how to compost, how to use compost, benefits of c	1. Expand the county website information on how to compost, how to use compost, benefits of composting and using compost, videos, and a library of additional resources	1. Work with the Master Gardeners, Institute for Local Self Reliance, Food Council Environmental Impact Working Group and other organizations to expand the information and resources on the website
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Support state level organics diversion, composting and compost use recommendations and legislation	1. Identify and implement recommendations in the report HB 171 that align with Climate Plan recommendations	1. Work with stakeholders who were involved in the study group such as the Sierra Club, the Institute for Local Self Reliance (see comments on recommendations in Annex 2) composting companies, etc. to identify key recommendations for advancing the Climate Plan composting and compost use goals
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Evaluate the current status and potential benefits of the use of compostable products and serviceware and increase usage if benefits outweigh costs	1. Review and evaluate issues related to compostable materials such as the safety of the materials used to produce them, issues of contamination for composting programs, lifecycle analysis-that includes the benefits and co-benefits of using the compost 2. Expand the use of compostable products in restaurants and food service if benefits outweigh costs	1. Review studies such as those in this article , and work with the US Composting Council and other related organizations to evaluate and assess compostable and if deemed appropriate, expand the use of, compostable products
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Modify the County's waste management plan. Eliminate incineration and put residuals in a safe and remote landfill, accessible by clean-energy rail haul. Give oversight of solid		The Northeast Maryland Waste Disposal Authority. This privately-owned organization has had control over the Division of Solid Waste for decades, and they receive County dollars to
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<p>waste management to DEP (not a private entity with its own interests). (Note: this is from the County Executive Transition Team Report.)</p>		<p>administer our program. Their vested interest is in incineration and therefore suppress any efforts to handle the County's trash in a greener and more responsible way. (Note: this is from the County Executive Transition Team Report</p>
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<p>Ensure that the Solid Waste Advisory Committee is informed about all composting related recommendations and solicit support</p>		<p>1.The Solid Waste Advisory Committee is comprised of citizen advisors charged with reviewing and advising county solid waste plans and programs</p>
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<p>The state Nutrient Management law needs to be reviewed to address the use of compost for lawn care</p>	<p>1. Review and assess Maryland's Chapter 10 Fertilizer Application Requirements for Land Not Used for Agricultural Purposes and assess the definitions of "natural organic fertilizer" and "organic fertilizer" in relation to the inclusion of compost. 2. Assess the definitions in the Nutrient Management Law (see page 7 @ §8-803.4(g) and establish recommendations on to address the broad restrictions for using compost in order to expand the use.</p>	<p>1.Assess other state restrictions such as Washington State restricts phosphorus in relation to "turf fertilizer." (For example, turf fertilizer is defined as: "Turf fertilizer" means a commercial fertilizer that is labeled for use on turf." And "commercial fertilizer" is defined as "a substance containing one or more recognized plant nutrients and that is used for its plant nutrient content or that is designated for use or claimed to have value in promoting plant growth, and shall include limes, gypsum, and manipulated animal and vegetable manures. It does not include unmanipulated animal and vegetable manures, organic waste-derived material, and other products exempted by the department by rule." Issues that need to be addressed include the relationship between the type of compost (e.g.high phosphorus content made with chicken litter) and the variety of uses of compost, such as large, medium, small and urban agriculture and landscaping, and lawn care. Soil testing requirements and other considerations need to be</p>
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		<p>assessed in relation to applications and type of compost use.</p> <p>2. MDA, MDE, County Office of Agriculture, DEP, farmers, organizations and community members related to agriculture, landscaping, small scale food production, gardening need to be included as stakeholders for assessing and resolving the issues related to restricted use of compost for the county lands.</p>
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<p>Create and adopt legislation that establishes support for county healthy soils programs</p>	<p>1.&2. Review the Maryland Healthy Soil Program and create legislation to support establishing healthy soil programs in the county</p>	<p>HB 1063 Maryland Agriculture and Healthy Soil Program</p> <p>Additional model legislation:</p> <p>Soil Health Institute Policy Resources Catalog (This catalog includes: 32 academic institutions, 85 state agencies, 53 state legislative bills, 87 non-profit entities, and 23 for-profit organizations.)</p> <p>Vermont S.43: An act relating to establishing a regenerative soils program</p> <p>New York A3281 – Carbon Farming Tax Credit</p> <p>Massachusetts: An act to Promote Healthy Soils</p> <p>Oklahoma: Carbon Sequestration Enhancement Act</p> <p>Utah: Concurrent Resolution on Carbon Sequestration on Rangelands</p>
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<p>Establish a County Carbon Sequestration Task Force or Advisory Committee to advise and monitor a county healthy soil program</p>	<p>1. Use County models that exist for Task Force/Advisory Committees and other state models can be used to establish the goals and responsibilities</p>	<p>1. Model the task force after examples such as the Hawaii task force</p>
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Cross Cutting Issues

Analyze every sector of the food system to identify the connections to and opportunities to expand and create climate solution based programs that reduce carbon emissions, increase sequestration and address adaptation and food security	1. Sectors that need to be analyzed include: Processing Recovery Waste Economic Development Access Production/Agriculture Security Procurement Environment Resilience Adaptation	1. Stakeholders working on this analysis and potential partners include but are not limited to: County HHS, Office of Ag., MC Food Council, County farmers, Montgomery Countryside Alliance, etc.
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Institute a broad based county and community program to educate and encourage the reduction of wasted food	1. Provide educational materials and action based strategies to residents, business, and county staff to reduce over purchasing food	Communicate the Identify and promote: “Communications focused on the potential of land-based solutions for addressing the climate threat.”•Success Stories— Positive success stories that chronicle the many co-benefits of building healthy soils. These stories of success must be shared with influential decision makers as well as farmers to spark more interest and investment in the field. Create an interactive platform for success stories. •Influential Messengers— Invest in influential speakers and presentations that can be shared to engage investors and policy makers at the highest levels.” https://www.breakthroughstrategieandsolutions.com/soilguide
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Institute a broad based county and community program to educate and encourage plant-based diets	1. Review “consumption-based” carbon based emission assessments and programs such as those instituted in Portland, San Francisco, Seattle, Vancouver, London that include plant-based diet and	1. Portland Multnomah County reported that the consumption-based emissions total was more than twice the amount of sector-based emissions. Vancouver’s “Greenest City Action Plan” includes an ecological footprint
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	<p>menu programs</p> <p>2. Partner with existing programs and utilize best practices such as those provided in the World Resources Institute “Playbook for Guiding Diners Towards Plant- Rich Dishes in Food Service”; the National Resources Defense Council Climate-Friendly Menus program which offers fact sheets and strategies on increasing plant based diets.</p> <p>3. Expand existing county based programs such as MCPS meatless offering and “Live Well” initiatives</p> <p>4. Create and implement a broad based campaign for county residents to increase awareness of the health and environmental benefits of eating more plant based meals</p>	<p>measurement significantly influenced by food consumer by residents.</p> <p>2. Identify and apply best practices for plant based education and behavior change programs such as Meatless Mondays and Meatless March https://www.meatlessmonday.com/</p>
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<p>Identify and review existing reports and programs to maximize current programs and identify the need for new programs to achieve the goals</p>	<p>1. Refer to the document: “MC Government Reports Related to GHG emissions”</p> <p>2. Survey county agencies and divisions to identify and establish county programs that impact (increase and decrease) greenhouse gas emissions</p> <p>3. Evaluate and rank high, medium, low priority programs to expand and modify to increase reductions and recommend additional programs to reduce emissions both rapidly and through sustained longer term reduction strategies.</p>	<p>1.Examples include: County Executive Transition Team Report Recommendations, MC Planning Department General Plan Update, Department of Permitting Services and the International Green Construction Code, Department of General Services Office of Energy and Sustainability Goals and Programs</p>
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<p>Climate Plan recommendations and programs need to be executed in cooperation with regional plans and programs</p>	<p>1. Review Climate Plan recommendations with MWCOG and surrounding counties to identify and ensure collaboration and opportunities to maximize cooperation for achieving mutually beneficial goals</p>	
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<p>Coordinate with the Montgomery County Planning Department on ensuring all the high priority recommendations of the Climate Plan are included in the update of the General Plan-2050</p>	<p>1. Current status of the issues identified by the Planning Department need to be reviewed and analyzed to identify which issues and potential policy recommendations are similar and support the priority one's in the Climate Plan and identify any areas that need to be addressed such as carbon sequestration and adaptation related to establishing a planning foundation for the county for 2050</p> <p>https://montgomeryplanningboard.org/wp-content/uploads/2019/11/Staff-Memo-for-12-12-PB-issues-briefing-FINAL.pdf</p>	
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Resource Needs, Financial Support, Metrics, Goals and Evaluation

Recommendations need to be assessed related to resources needed such as, staffing, technical assistance, equipment, and other financial and budgetary factors. Model programs, such as those in DC, Austin Texas, etc. and programs that are utilizing best practices will need to be reviewed in relation to the operating and/or capital funds they have budgeted and expended in order to establish appropriate county budget recommendations to support and expand existing and establish new programs. The methods of revenue generation and the revenue sources for model programs should also be reviewed and considered to provide recommendations for financial support. Innovative funding and other methods of achieving the Climate Plan goals need to be identified and assessed, such as the purchase of carbon offsets especially for personal consumption and other county programs and operations that increase carbon emissions, e.g., airplane travel.

The County energy tax, which is estimated to bring in \$198,918,812 in revenue for FY2020

<https://apps.montgomerycountymd.gov/basisoperating/Common/Schedule.aspx?ID=SCHC&SchedID=C3> is currently used as “general funds” and all or a portion of these funds should be used to reduce greenhouse gas emissions and should be a source of support for high priority, high impact carbon emissions reduction programs.

Recommendations need to be defined in terms of specific, measurable goals in terms of measurement indicators and metrics and measured timeframes for implementation and evaluation. All goals need specific evaluation plans and timelines for assessment, review, reporting and adjustments in order for programs to continuously enhance carbon emission reduction and sequestration goals.

County energy tax - dedicated funds for reducing greenhouse gas emissions.

Scaling-out 2021-27

Overarching Recommendation	Specific Recommendations	Comments
<p>Launch an urban/ suburban backyard carbon farming campaign</p>	<p>Review existing programs for potential to be presented as one window of opportunity for backyard carbon farming (e.g. Rainscapes, tree-planting etc)</p> <p>Create a campaign approach to enlist community action e.g. challenge neighborhoods to form carbon farming groups that can attract support and incentives, modeling change in their community.</p> <p>Consider developing an Urban Extension Service (perhaps an out-growth of the Rainscapes program) which enlists the support of key stakeholders such as landscaping companies and Master Gardeners.</p>	<p>Urban Drawdown Initiative: Boulder and San Francisco examples Carbon Capture Gardens on The Nature of Cities How to turn your backyard into a carbon sink Climate wise landscaping Capturing carbon in urban soils: What's possible?</p>
<p>Leverage funding for water quality protection practices that also sequester carbon.</p>	<p>Prioritize and maximize the use of natural or green infrastructure practices for achieving compliance with the MS4 or Stormwater Permit by developing standard practices for assessment and comparison of green and gray infrastructure options for all stormwater management projects.</p> <p>Proactive identification and place-based participatory assessment of opportunities for natural green infrastructure projects so that these are “investment ready” and windows of opportunity can be acted upon.</p> <p>Revise County Codes to eliminate the granting of waivers on stormwater requirements for new development.</p> <p>Build on the existing Rainscapes program which promotes, provides technical assistance</p>	<p>The Water Quality Protection Charge provides a dedicated source of funding for reducing stormwater runoff which is required under the MS4/stormwater permit. However green infrastructure, i.e., vegetation based practices that promote water infiltration in soil and reduce stormwater runoff and sequester carbon are not the default practice and only account for a limited portion of projects.</p> <p>At present, credits are only provided for retrofits of areas not already treated to the maximum extent practicable, which is suppose to be required for new development. In practice, new developments are often granted “waivers” and able to pay a small “fee in lieu” of installing stormwater management practices.</p> <p>New draft MS4 Accounting</p>

	<p>and financial incentives for conservation landscaping that reduces stormwater runoff, to include additional support for carbon sequestration.</p> <p>Establish a Retention Credit Trading program (similar to that in DC) which enables third party project developers to achieve economies of scale by engaging multiple landowners and achieving economies of scale in landscape restoration activities that have both water quality and carbon sequestration benefits..</p> <p>Delineate sourcewater areas and leverage forest conservation and carbon farming in these areas as a key practice for protecting water quality and avoiding further increases in the cost of water treatment. Prioritize these areas for conservation easements that can also receive credit for water quality protection [under an expected new provision in new MDE MS4 Accounting Guidance document, currently issued as a draft]</p> <p>Establish a baseline of existing forest cover that can be used to demonstrate conservation is additional so that it can be credited for water quality protection purposes.</p>	<p>Guidance would also credit conservation of forests that are not otherwise protected. This could be a game changer because it can prevent degradation of water quality as well as mitigate flooding and sequester carbon.</p> <p>Up-county watersheds all enter the Potomac near or adjacent to the WSSC water intake, which has significantly increased the cost of water treatment.</p>
<p>Other measures mentioned at meeting - may need to be better organized/edited and elaborated:</p>		
<p>Use co-benefits to make the case for natural/ green infrastructure</p>	<p>A site specific analysis of the co-benefits of natural infrastructure are more convincing than a standard list.</p>	
<p>Identify areas with potential for sequestration and policies that may be needed to enable or incentivize them.</p>	<p>Areas that could have great potential for sequestration include land along highways,</p>	<p>Land use policy is key to county-wide landscape transformation and is where this County government has the greatest authority. Montgomery County</p>

	<p>school lawns not used for athletic purposes, lawns on very large residential lots.</p> <p>Encourage meadows in the place of large lawns</p> <p>Changes in HOA governance [How? does the County have any say in HOA governance?]</p>	<p>has been a national leader in innovative land use policy, as exemplified in the creation of the Agricultural Reserve using tradable development rights, and the Stream Valley Park System, which avoided development in 100-year floodplains. At this critical juncture, it is important to protect and build on this unique legacy.</p>
<p>Improve soil health with compost and biochar</p>	<p>Produce biochar from downed trees for use in improving soil health.</p>	<p>Even forests in the county are growing on highly eroded soils.</p>
<p>Urban carbon farming</p>	<p>Provide tax incentives such as property tax breaks for urban carbon farming</p>	
<p>Use schools as demonstration sites and learning environments for urban carbon farming</p>		
<p>Establish a landscape certification program</p>	<p>Provide landscape certification for carbon sequestration based on measurable standards</p> <p>Require landscape certification for new developments</p>	<p>This would be similar to the LEED certification for green buildings.</p>
<p>Farmers markets</p>	<p>Promote CSA activities</p> <p>Maintain a permanent market for local farmers</p>	

Bold new ideas and future thinking

Overarching Recommendation	Specific Recommendations	Comments

Facing Uncertainties

Disruptions due to temperature and moisture changes and the impact on agriculture/food production, pollinators and plant pollination capabilities, increasing costs of food, national/regional/local migrations due to climate disruption, etc.

Questions for further research

Are there any considerations/ examples specific to Urban/ Suburban land-use to include here?

Annex 1: Excerpts from MoCo Climate Mobilization Report Recommendations, 2018

Waste Reduction, Reuse and Recycling

(Recycled Paper, Residential Recycling and Industrial Recycling)

Financial Incentives

- Incorporate “pay-as-you-throw” charging systems for waste disposal.

Food and Farming Strategies

(Reduced Food Waste, Plant-Rich Diet, Conservation and Regenerative Agriculture, Nutrient Management and Composting)

The growth, consumption and management of excess food encompasses a variety of activities that involve the County’s agricultural sector, restaurants and other food service establishments, and residents. Current

Status/Activity:

Conservation and Regenerative Agriculture, Nutrient Management

- Maryland Cover Crop Program and Maryland Agricultural Water Quality Cost Share grants.
- Technical and financial assistance through the USDA Natural Resources Conservation Service (NRCS).
- Technical assistance for developing conservation plans through Montgomery County Soil Conservation District (MSCD).
- MSCD equipment rental program (e.g., No Till Drill).
- University of Maryland Extension Nutrient Management Program provides farmers with technical assistance for nutrient management plan development.
- Sustainable farms included in the Green Business Certification Program.

Reducing Food Waste and Encouraging Plant Rich Diets

- MCPS’ Division of Food and Nutrition Services (DFNS) features daily meatless items; working with manufacturers to develop plant-based protein offerings that meet the required meat/meat alternative equivalent.
- The Strategic Plan to Advance Composting, Compost Use and Food Scraps Diversion in Montgomery County (April 2018) provides direction, framework and recommended strategies to reduce wasted food, channel excess food to others with unmet needs and increase the amount of food scraps recycled through composting and/or other technologies, such as anaerobic digestion.
- County supports Community Food Rescue, a Manna Food program that receives food donations from local businesses that would have been thrown away and delivers it to agencies serving those in need.
- The Montgomery County Food Council is creating a comprehensive list of all current hunger relief resources and emergency food providers in the County to highlight existing efforts and

gaps; the Council also created a Food Security Plan which addresses who is at risk, where they are and what their barriers are to food security.

- Food waste composting taking place at cafeterias in three County buildings –Executive Office Building, Council Office Building and Public Safety Headquarters.
- Live Well initiative incorporates messaging and campaigns for plant based diets.

Potential Next Steps:

Policy Changes

- Provide farmers with subsidized compost to help sequester carbon in soil.
- Require all restaurants and caterers to compost food scraps and disposable food service ware.
- Explore local options to reduce packaging and single-use items (bags, utensils, condiments, napkins) in restaurants and food service operations.
- At MCPS cafeteria lines, display fruit/vegetables at the beginning and make them default side dishes.
- Provide expedited permitting for rooftop vegetable gardening.
- Support amendments to Maryland’s Lawn Fertilizer Law to ease restrictions on the application of compost to turf.

Programs

- Develop incentives to encourage increased separation of commercially-generated food scraps for recycling.
- Establish a Regenerative Agriculture staff position to train farmers and assist them in becoming certified through the Rodale Institute’s new Regenerative Organic Certification program (in pilot stage).
- Secure processing capacity for commercially-generated food scraps to facilitate and increase the amount of food scraps separated for recycling, delivered to processing facilities for composting and/or anaerobic digestion and recycled.
- Refine and implement recommendations of the Strategic Plan to Advance Composting, Compost Use and Food Scraps Diversion in Montgomery County.
- Establish training program around no/low till, cover cropping, crop rotation, etc.
- Launch Meatless in March campaign, similar to the City of Santa Monica.
- At MCPS, increase the variety of plant-based entrees to include home style dishes using beans, lentils and dried peas; develop marketing strategies to educate students on plant-based protein entrées and how they can be part of a healthy school meal; continue student based focus groups at all levels to assess acceptability of new plant-based protein sources as part of the reimbursable meal.
- Expand the number of edible gardens at MCPS and other County government facilities.

Financial Incentives

- Incentivize farmers to use cover crops and practice crop rotation and no/low till.
- Provide property tax credits to farmers who achieve Regenerative Organic Certification.
- Provide financial incentives to restaurants with all-vegetarian or vegan menus.
- Provide farmers with subsidized compost to help sequester carbon in soil.

Annex 2: Institute for Local Self Reliance Comments on House Bill 171 – Organic Materials Diversion and Infrastructure Recommendations

Link to HB 171

<https://mde.maryland.gov/programs/LAND/RecyclingandOperationsprogram/Pages/House-Bill-171-%E2%80%93-Organic-Materials-Diversion-and-Infrastructure-%E2%80%93-Study.aspx>

----- Forwarded message -----

From: **Brenda Platt** <bplatt@ilsr.org>

Date: Mon, Dec 17, 2018 at 5:24 PM

Subject: ILSR comments on draft HB 171 recommendations

To: Dave Mrgich -MDE- <dave.mrgich@maryland.gov>

Cc: Adria Aceto <aaceto@mdfoodbank.org>, Andrew Cassilly <Andrew.Cassilly@hcps.org>, Ben Fischler <brf57@yahoo.com>, Cailey Locklair Tolle <dcurran@mdra.org>, Chaz Miller <gotmil@starpower.net>, Christopher Rice -MEA- <chris.rice@maryland.gov>, Daryl Braithwaite <DarylB@takomaparkmd.gov>, Delegate Shane Robinson <shane.robinson@house.state.md.us>, Dena Leibman <dena@futureharvestcasa.org>, Doug Myers <dmyers@cbf.org>, Garry Aime -MEA- <garry.aime@maryland.gov>, Gary Felton <gfelton@umd.edu>, Hans W. Schmidt -MDA- <hans.schmidt@maryland.gov>, James Palma -COMMERCE- <james.palma@maryland.gov>, Jane Seigler <seigler.jane@gmail.com>, Jane They <theyjane@gmail.com>, John Sullivan -MDE- <john.sullivan1@maryland.gov>, Julie Paluda <julie.paluda@calvertcountymd.gov>, Kaley Laleker -MDE- <kaley.laleker@maryland.gov>, Keith Losoya <keith@wasteneutral.com>, Laura Cattell Noll <lcattellnoll@fergusonfoundation.org>, Pam Kasemeyer <pmetz@smwpa.com>, Patrick Serfass <pserfass@ttcorp.com>, Peter Houstle <phoustle@marinermanagement.com>, Roni Neff <rneff1@jhu.edu>, Senator Thomas Middleton <thomas.mclain.middleton@senate.state.md.us>, Stephanie Cobb Williams -MDE- <stephaniecobb.williams@maryland.gov>, Stephen Shaff <steve@csbcouncil.org>, Steven Birchfield <sbirc@menv.com>, Susan L. Dalandan <sdalandan@lvfpc.org>, Zack Brendel <zack@levellandinc.com>

Dear Dave and others,

Thank you for the opportunity to comment on the draft recommendations and for all the work you and your team have accomplished.

I respectfully submit these comments on behalf of the Institute for Local Self-Reliance.

1. We would like to see strong legislative recommendations for food waste reduction and recovery based on the best parts of the laws in CT, VT, MA, RI, and CA. HB 171 morphed into a study group from a bill that required large food waste generators (2 tons per week per location) to divert food waste if capacity existed within a certain mile radius. Requirements would only go

into effect if capacity exists. The food could be diverted through any combination of a) reducing food residuals, b) donating servable food, c) installing an on-site system, d) agricultural use (including consumption as animal feed), or e) working with a hauler to send the separated food residuals to a composting or anaerobic digestion facility for processing.

2. Introduce some key legislation in the 2019 session including food waste recovery requirements (as per above), expanded liability protections for Maryland's "Good Samaritan" food donation law, and the expanded farm food donation tax credit program.

3. Set more aspirational recycling goals for food and yard waste such as those that were included in the 2016 draft MDE Zero Waste Plan: 60% food waste and 80% yard waste by 2025, and 90% food waste and yard waste recycled by 2040.

4. Incorporate recommendations to address HB 171's requirement that the study group explore ways to encourage a decentralized and diverse infrastructure. We would like to see infrastructure include home composting systems, community scale composting, on-site composting, and on-farm composting. Make sure that any financing/grant program cover a decentralized and diverse infrastructure, that the state provide a robust education and outreach program that encompasses a wide range of systems and sizes to reduce and recover organic material, and that the state help counties and cities adopt a decentralized and diverse infrastructure. ILSR can help prepare specific recommendations for consideration by the group in 2019.

5. Regarding clarifying the guidance that anaerobic digestion is considered recycling in meeting counties' MRA recycling rates, we recommend that only weights of product actually recycled be counted (not any tonnage converted into biogas) and that a definition for what constitutes "returned to market place" be developed very carefully and conservatively (with input from stakeholders and the public). Further, we recommend that material used as daily landfill cover be specifically excluded from counting as recycling.

6. Regarding updating Maryland's source reduction credit, we recommend an assessment as to how well the activities do in reaching the credits awarded before more credits are allowed. This is to ensure that the activities are achieving the intended goal of diverting/avoiding waste.

7. Regarding the draft recommendation to improve access to information on economic incentives for organics recycling, we believe this is an important component of what should be a must larger and central recommendation of the study group to identify means to encourage investment in infrastructure and provide economic incentives to expand capacity for yard waste, food residuals, and other organic materials diversion in the State. We'd like to see this recommendation enhanced and made much more robust and that it specifically addresses how to support investment and funding for a decentralized and diverse infrastructure. We recommend that a \$3 per ton surcharge be assessed at all disposal facilities that would go into a grant program to be dispersed to cities, counties, and other qualifying projects. We

recommend identifying other specific funding mechanisms like this to ensure a grant and loan program is implemented in Maryland.

8. Regarding the draft recommendation to explore the use of State land for composting and anaerobic digestion facilities, we believe this is an important component of what should be a much larger and more robust recommendation from the study group to address lack of sites for facilities (and not just State owned land). HB 171 required the study group to develop, in consultation with local governments, model guidelines and best practices for the local identification of properties or development zones where diversion infrastructure may be developed. We would like to see this work done and incorporated into the study group recommendations; further, the work identifying properties should take into account properties for a decentralized and diverse infrastructure that encompasses community-scale, on-site, and on-farm composting.

9. We recommend that the State identify food waste generators that could be processing their waste on-site via composting or anaerobic digestion and that the State support such efforts through grants, loans, operator training, education/outreach, tours of successful operations. These include correctional facilities, conference centers, large food banks, schools, colleges, and more.

10. HB 171 required the study group to recommend measures to promote the diversion of yard waste, and food residuals, and other organic materials in the State, including any necessary programmatic, legislative, or regulatory changes. We would like to see more specific recommendations to create robust programs for home composting, master composter training, community scale composting, and support for on-farm composting.

11. We recommend the state revise its food waste recovery hierarchy to clarify that composting and anaerobic digestion are not always on the same par. For instance, home composting should be prioritized over collecting residential food scraps and transporting to a far-away centralized digester. We recommend that the State embrace ILSR's [Hierarchy to Recover Food Waste & Grow Community](#), which directly addresses HB 171's requirement that the State look at how to encourage a decentralized and diverse infrastructure.

12. With regard to the draft recommendation to create a series of fact sheets on composting and anaerobic digestion, we believe this is a small component of what should be a much larger and more robust recommendation from the study group to educate the public, local governments, and others. We recommend, for instance, the development of a school curriculum on soil and compost, pilot composting programs at K-12 schools, a massive outreach and education campaign linking food waste to climate change and on the potential of compost and healthy soils to reverse climate change, to name a few. The State's web site on composting should be completely revamped as well.

13. We recommend creating demand for compost and evaluating the implementation of the 2014 law requiring the State Highway Administration to develop specs for compost and

compost-based products. What is the status of that law's implementation? What other programs and legislation could be implemented to increase demand for compost? We also recommend that market development for dredged material NOT be combined and mixed up with market development for compost, which is a living soil-amendment rich in organic matter. Dredged material and compost are not the same and should not be confused.

Very best,
Brenda

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Brenda Platt

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Director, Composting for Community Project

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- Check out our latest guides to composting:
 - [**Yes! In My Backyard: A Home Composting Guide for Local Government**](#)
 - [**Guide to Composting Onsite at Schools**](#)
- Want to learn about community composting?
 - See our video: [What Is Community Composting?](#)
 - Attend our next national [Cultivating Community Composting Forum!](#)